

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1-48 cancelled

49. (new) A method for the quantification of phosphoinositide kinase activity, which comprises:

exposing a protein having a phosphoinositide lipid recognition motif that interacts with a target lipid comprising a phosphorylation product of a reaction between the phosphoinositide kinase and a substrate phosphoinositide lipid and a competing phosphoinositide lipid which is labeled by a non-radioactive signal, to an analyte solution containing a determined amount of said competing labeled phosphoinositide lipid and an unknown amount of said target lipid; and quantifying said target lipid in said analyte solution by measuring variations of said non-radioactive signal, wherein said target lipid has a stronger affinity for said protein having a phosphoinositide lipid recognition motif than does said competing lipid.

50. (new) The method according to claim 49, wherein said protein has specificity for phosphoinositide products of phosphatidylinositol 3-kinase (PI 3-Kinase) activity.

51. (new) The method according to claim 50, wherein said protein contains an affinity tag fusion with said lipid recognition motif.

52. (new) The method according to claim 50, wherein said protein is selected from an anti-phosphatidylinositol(3,4,5)phosphate antibody, an anti- phosphatidylinositol(3) phosphate antibody, a lipid recognition protein with specificity for phosphatidylinositol(3,4,5)_phosphate, and a lipid recognition protein with specificity for phosphatidylinositol(3)_phosphate.

53. (new) The method according to claim 49, wherein said phosphoinositide kinase is phosphatidylinositol 3-kinase (PI 3-Kinase), and said target lipid is a phosphorylation product of phosphatidylinositol 3-kinase (PI 3-Kinase) and a phosphoinositide substrate lipid.

54. (new) The method according to claim 53, wherein said phosphorylation product of the reaction of phosphatidylinositol 3-kinase (PI 3-Kinase) with a substrate lipid is phosphatidylinositol(3,4,5) phosphate or phosphatidylinositol(3) phosphate.

55. (new) The method according to claim 49, wherein said method is accomplished using a plate-based assay.

56 (new) The method according to claim 55, wherein said assay is an enzyme linked immunosorbent assay (ELISA).

57. (new) The method according to claim 55, which further comprises: prior to exposing said protein having a lipid recognition motif to a target lipid and a competing lipid, coating an assay plate with said competing lipid.

58. (new) The method according to claim 57, wherein coating step includes coating a streptavidin-coated plate with said competing lipid.

59. (new) The method according to claim 49, wherein additional competing and noncompeting lipids are present in said analyte solution.

60 (new) A kit for the quantification of phosphoinositide kinase activity, which comprises: a competing phosphoinositide lipid; and a protein having a phosphoinositide lipid recognition motif that interacts with a target lipid comprising a phosphorylation product of the reaction between the phosphoinositide kinase and a substrate phosphoinositide lipid and said competing lipid, said target lipid having a stronger affinity to said lipid recognition motif than said competing lipid.

61. (new) The kit according to claim 60, which further comprises a multi-well assay plate.
62. (new) The kit according to claim 61, wherein said multi-well assay plate includes said competing lipid immobilized in the wells of said multi-well assay plate.
63. (new) The kit according to claim 60, wherein said protein is selected from an anti-phosphatidylinositol(3,4,5) phosphate antibody, an anti- phosphatidylinositol (3) phosphate antibody, a lipid recognition protein with specificity for phosphatidylinositol (3,4,5) phosphate, and a lipid recognition protein with specificity for phosphatidylinositol (3) phosphate.
64. (new) The kit according to claim 60, wherein said protein contains an affinity tag fusion with a pleckstrin homology domain.
65. (new) The kit according to claim 64, wherein said phosphoinositide kinase is phosphatidylinositol 3-kinase (PI 3-Kinase).
66. (new) The kit according to claim 61, wherein said multi-well assay plate includes said competing lipid immobilized in the wells of said multi-well assay plate by means of a streptavidin-coating on said wells.
67. (new) The kit according to claim 60, which further comprises additional competing and noncompeting lipids.